also destroyed the hearing. These findings placed exactly the seat of the disease and showed that the intra-labyrinthine tension is an important factor, as well as possibly the chemical constitution of the endolymph.

An opportunity recently arose of correlating these biochemical and clinical observations with the morbid anatomy. Such an opportunity is rare, for the disease is not fatal and when death occurs from other causes there is rarely anyone at hand sufficiently interested or knowledgeable to secure helpful information. Here, however, 2 patients with these symptoms succumbed to the operation of intracranial division of the eighth nerve and their temporal bones were removed and examined microscopically.[9] The labyrinths of another patient dying of secondary hæmorrhage after an intranasal antrostomy were similarly investigated.[10] In each case the chief finding was a dilatation of the endolymph system affecting chiefly the scala media and saccule. In addition, the soft connective tissue surrounding the saccus endolymphaticus was absent, and this tissue is thought to be the site of absorption of the endolymph. The stria vascularis in the scala media (the supposed site of formation of the fluid) is relatively unharmed histologically and perhaps even less so functionally since its blood-supply is arranged so that it is protected against a rise of pressure in the duct. Thus a defect in the absorption rather than the production of endolymph is indicated as the cause of the raised tension. It is possible that the formation of an abnormal endolymph of high ionic concentration could lead to an increase in endolymphatic pressure by osmosis from the perilymph through the membranous walls. But in any case, once such a pressure exists anoxæmia of the end-organs will result with a lowered functional condition of the labyrinth. A relatively slight increase in volume of the endolymph would result in a very great increase in pressure, consequent asphyxia of the end-organs and thus an attack of vertigo. The material for examination is still scanty, but the argument is both consecutive and feasible. Applying these principles to treatment, we can choose between the diet suggested by FURSTENBERG and modified by TALBOTT and BROWN, and the various surgical methods, decompression of the labyrinth, its destruction, or intracranial division of the eighth nerve or its vestibular portion. It is perhaps wise to try the simpler and safer before proceeding to the more complicated and hazardous measures.

9. Hallpike, C. S., and Cairns, H. *Ibid*, 1938, **31**, 1317.
10. Hallpike and Wright, A. J. *Ibid*, 1939, **32**, 1646.

ANNOTATIONS

RATIONING OF MEAT

LAST Monday meat was added to the list of rationed foods. No-one can now spend more than 1*s*. 10*d*. in any week on what is called butcher's meat. A child under six can only have 11*d*. worth. The restriction will hit quite severely those of us who are in the habit of eating freely of sirloin and steak. There is an attractiveness about the more select parts of the bovine musculature, such as psoas and erector spinæ and even gluteus maximus. But as a seasoned broadcaster has already told the listening public the hardship is unreal, for the dietitian can make up a complete menu within the rationing scheme. The only real hardship has already been met by allowing the diabetic to exchange his unwanted sugar for an additional ration of flesh. Many kinds of animal protein are in fact not rationed at all: there is poultry and game for those who can afford it, rabbit and excellent fat fish for those who cannot. And there is always cheese. Pies and puddings and sausages are exempt if they contain no more than 50 per cent. of meat by weight and, for the first month at least, cooked meats will be sold free of coupons. Actually it seems doubtful whether, as in the case of bacon, people generally can afford to buy up to their total meat ration, and the enhanced price of the cheaper cuts and the edible offals is something of a calamity. One has a feeling that some readjustment may be necessary in the light of experience, or this last stage of rationing may press hardly on poorer folk. The physiologist might criticise the allocation from another angle. There should have been some consideration for age. Most people over 50 and all over 60 would have been better with half a meat ration; the other half might well have been allotted to the young adults in whom the urge to eat flesh is strong, especially when they live outdoor lives.

A NEW VASODILATOR

WHEN new substances with chemical structures allied to that of an active drug are studied by pharmacologists their actions are often found to be qualitatively similar to that of the original drug, but the results are more interesting when new actions appear. The study of a number of substances containing the iminazoline ring, which is similar to the iminazol ring in histamine, by Hartmann and Isler[1] has shown that 2 benzyliminazoline, which is known by the trade name of Priscol, has actions superficially similar to, but fundamentally different from, those of histamine. Like histamine, it dilates small blood-vessels and this action is illustrated very effectively in an article by R. Meier and R. Müller[2] of the Ciba laboratories by coloured photographs of the pads of a dog's foot, of a dog's nipple and of a rabbit's conjunctiva. When injected intravenously, priscol causes a short-lived fall of blood-pressure and an increase in the blood-flow to a dog's leg. The action has not yet been studied in full detail and it is not known whether the vasodilatation is confined to skin and mucous membranes or whether all tissues are equally affected. Histamine causes similar effects by dilating capillaries, but priscol dilates small arteries and this effect, unlike the corresponding effect of histamine, is particularly well shown in experiments on rabbits. It also causes the erection of hair, and comparatively large doses stimulate isolated plain muscle and isolated heart and constrict the coronary vessels. Priscol is most effective when given by intravenous injection, but it is also active when injected by other routes or when given by the mouth. Strong solutions, locally applied, dilate the vessels of a rabbit's cornea for several hours and

1. Hartmann, M. and Isler, H. *Arch. exp. Path. Pharmak.* 1939, **192**, 141.
2. *Schweiz. med. Wschr.* 1939, **29**, 1271.